

## Remarks

### Amendments

Claims 37, 39, 60, and 62 have been amended to clarify an ambiguity in the claims related to the number of species of analyte DNA that could be present. Each of these claims has been clarified so that if two species are recited in the ultimate step, then one species is not an option in the initial step. Claim 44 has been amended to recite determination of product beads comprising a first species of analyte as a fraction of product beads. New claim 85 has been added to recite determination of the proportion of product beads comprising a first species of analyte DNA molecule to product beads comprising a second species of analyte DNA molecule. The amendment to claim 44 is supported at page 13, lines 1-4, and at page 8, last paragraph. The recitation in claim 85 is supported at page 23, lines 13-17, and at page 8, last paragraph. These recitations replace a recitation of determining relative amounts of products beads comprising one or more sequence features. These recitations do not add new matter to the application.

### Interview

Examiner Woolwine conducted a telephone interview with the undersigned and with Mr. Aaron Young of Genzyme on January 28, 2010. Some possible amendments and their efficacy in overcoming the outstanding rejections were discussed, but no agreements were reached.

### 35 U.S.C. § 112, second paragraph

Claims 37, 39, 60, and 62 stood rejected as unclear due to the recitation of “one or more”

in the first step and “a first and a second” in the final step. Each of these claims has been amended so that either the first step recites “more than one” or so that the last step does not recite “a second” analyte. It is respectfully submitted that these amendments clarify the claims and remove the ambiguity which was pointed out in the Office Action.

35 U.S.C. § 102(e)

Claim 44 is newly rejected as anticipated by Leamon (US 7323305). The rejection asserts that Leamon’s teaching of simultaneously sequencing the nucleic acid fragments bound to each bead in at least 10,000 reaction chambers *inherently* determines relative amounts of product beads comprising one or more sequence features, as claim 44 recited.

Applicants do not concede that in fact Leamon does inherently make such a determination. However, in an effort to advance prosecution, claim 44 has been amended to recite determination of amount of product beads comprising a first species of analyte DNA molecule *as a fraction* of product beads. New claim 85 has been added and recites determining *proportion* of product beads comprising the first species of analyte DNA molecule to product beads comprising the second species of analyte DNA molecule. Leamon does not teach determination of either a fraction or a proportion, either explicitly or inherently.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted; emphasis added). See MPEP § 2112.

Leamon did not teach an analysis that provides a fraction or a proportion. At most, Leamon taught collection of data. Data, however, do not analyze themselves. Leamon taught sequencing of randomly fragmented DNA. Even if one wanted to analyze Leamon’s data quantitatively, it is not clear how one would do it. Data collection is simply not the same as data analysis. Nor is collection of data inherently analysis of the data. All the more so, collection of data is not inherently a particular analysis of data. Leamon does not teach determining a fraction or a proportion as now recited in claims 44 and 85.

It is respectfully submitted that claims 44 and 85 are not anticipated by Leamon.

A speedy allowance of all claims is respectfully requested.

Respectfully submitted,

Date: 17 March 2010

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